

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 Claim 1 (currently amended): A bonding device for bonding an  
2 object to be bonded under pressure to a surface to be bonded  
3 by allowing a load and vibration to act on the object to be  
4 bonded, the bonding device comprising:

5 a bonding tool, abutting on the object to be bonded; and  
6 a pressing unit, pressing the bonding tool to the object  
7 to be bonded;

8 wherein the bonding tool includes:

9 a transversely elongated horn;  
10 a vibrator, applying a longitudinal vibration to the  
11 horn in a first longitudinal direction along the longitudinal  
12 direction of the horn;

13 a protruding part, protruding from the horn in a  
14 second direction substantially perpendicular to the first  
15 direction;

16 a bonding operation part, provided in the end part  
17 of the protruding part to abut on the object to be bonded; and

18 a heating unit, inserted into a mounting hole  
19 provided in the horn; and

20 wherein the heating unit is mounted into the mounting  
21 hole in a loose state with a substantial space enough to

22 prevent a contact pressure of the heating unit ~~maintained from~~  
23 against the inner surface of the mounting hole.

1 Claim 2 (original): The bonding device according to claim 1,  
2 wherein a vent part is provided for preventing the transfer of  
3 heat to the vibrator in the horn between the vibrator and the  
4 bonding operation part.

1 Claim 3 (previously presented): The bonding device  
2 according to claim 2, wherein the vent part is a transversely  
3 elongated slit in the first direction.

1 Claim 4 (withdrawn): The bonding device according to claim  
2 1, wherein the heating unit is provided in a part  
3 corresponding to an antinode of the vibration of the horn.

1 Claim 5 (currently amended): ~~The~~ A bonding tool for bonding  
2 an object to be bonded under pressure to a surface to be  
3 bonded by allowing a load and vibration to act on the object  
4 to be bonded, the bonding tool comprising:

5 a transversely elongated horn;;  
6 a vibrator, applying a longitudinal vibration to the horn  
7 in a first direction along the longitudinal direction of the  
8 horn;

9 a protruding part, protruding from the horn in a second

direction substantially perpendicular to the first direction;

a bonding operation part, provided in the end part of the protruding part to abut on the object to be bonded; and

a heating unit, inserted into a mounting hole provided in the horn;

wherein the heating unit is mounted into the mounting hole in a loose state with a substantial space enough to prevent a contact pressure to the heating unit maintained from against the inner surface of the mounting hole.

Claim 6 (original): The bonding tool according to claim 5, wherein a vent part is provided for preventing the transfer of heat to the vibrator in the horn between the vibrator and the bonding operation part.

Claim 7 (previously presented): The bonding tool according to claim 6, wherein the vent part is a transversely elongated slit in the first direction.

Claim 8 (withdrawn): The bonding tool according to claim 5, wherein the heating unit is provided in a part corresponding to a antinode of the vibration of the horn.

Claim 9 (currently amended): ~~The~~ A bonding tool for bonding an object to be bonded under pressure to a surface to be

3 bonded by allowing a load and vibration to act on the object  
4 to be bonded, the bonding tool comprising:

5 a transversely elongated horn;

6 a vibrator, applying a longitudinal vibration to the horn  
7 in a first direction along the longitudinal direction of the  
8 horn;

9 a protruding part, protruding from the horn in a second  
10 direction substantially perpendicular to the first direction;

11 a bonding operation part, provided in the end part of the  
12 protruding part to abut on the object to be bonded and;

13 a rod shaped heating unit, inserted into the first  
14 direction of the horn.

1 Claim 10 (original): The bonding tool according to claim  
2 9, wherein a vent part is provided for preventing the transfer  
3 of heat to the vibrator in the horn between the vibrator and  
4 the bonding operation part.

1 Claim 11 (previously presented): The bonding tool according  
2 to claim 10, wherein the vent part is a transversely elongated  
3 slit in the first direction.

1 Claim 12 (withdrawn): The bonding tool according to claim  
2 9, wherein the heating unit is provided in a part  
3 corresponding to an antinode of the vibration of the horn.